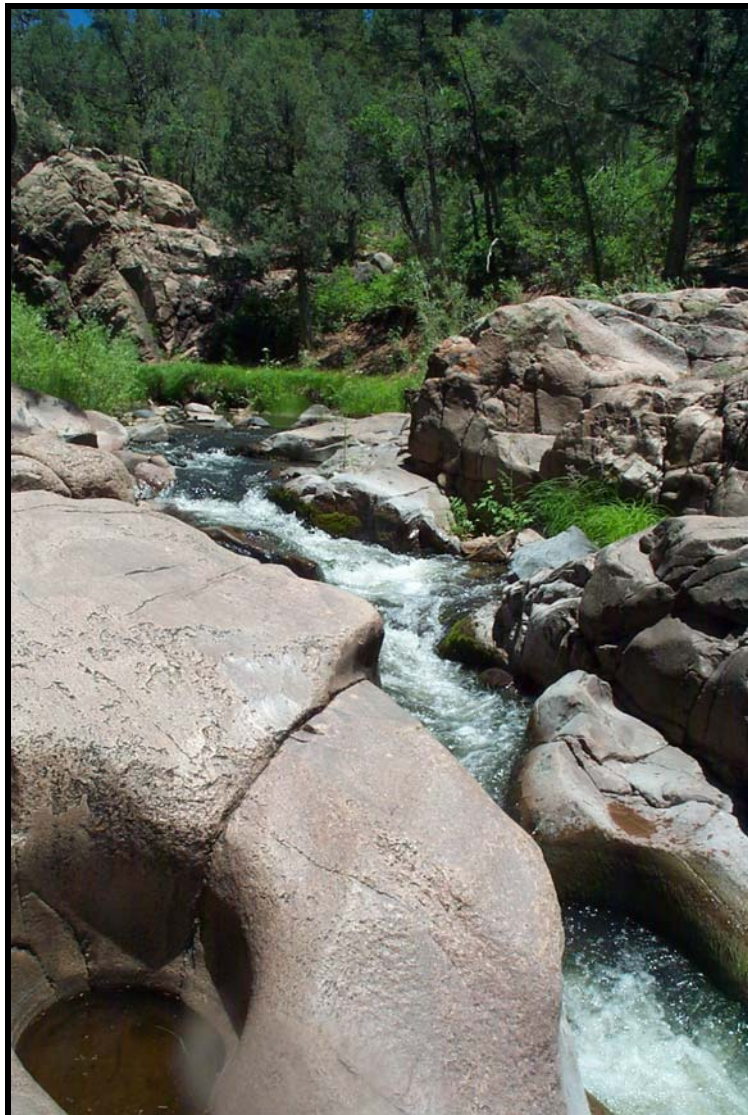
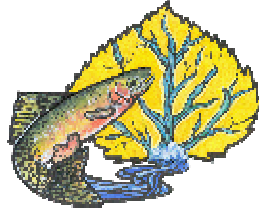


**Santa Fe National Forest
Fisheries Program
Annual Report
2004**



What a wild ride it has been. As I built this year's Annual Report, I was stunned by our team's accomplishments. How did we pack it all in?

2004 was the amalgamation of four years of hard work. We completed our first phase of Respect the Rio; the Rio de las Vacas finally felt its waters fill new crevices with the full implementation of the Vacas Project; with baseline collected, began our long-term monitoring of the waters in San Pedro Parks Wilderness; knocked out a High Lakes Inventory Report that summarized two years of intense work; and will soon release a Forest-wide Thermograph Report that captures three years of data collection and intensive analysis.

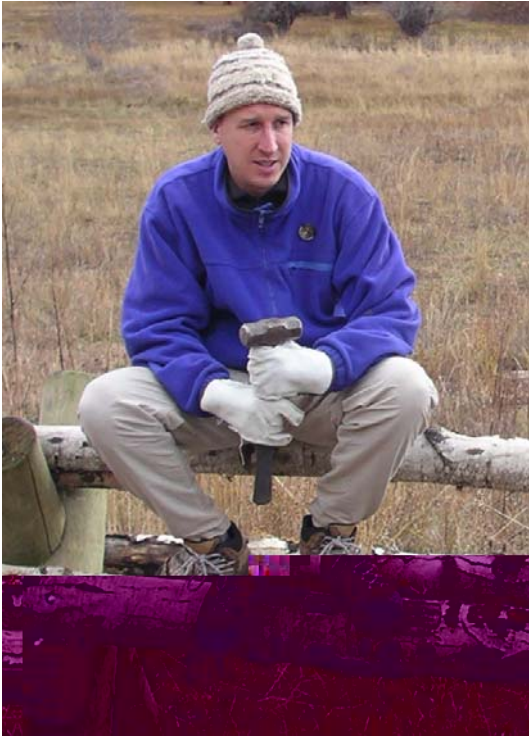
If that wasn't enough, we piled on more work, punching out stream miles in remote areas, talked with nearly 1,000 school kids, met with over 2,000 recreationists, built fence to protect wet meadows, dropped trees into streams for habitat, created two awesome websites (www.fs.fed.us/r3/sfe/fish/index and www.fs.fed.us/rtr), mapped out 30 potholes and lakes in four days, and somewhere in the middle of all that had a successful Kid's Fishing Day with our new partner, New Mexico Trout. Huge kudos to Jo Wargo, by the way, for keeping KFD alive and kicking.

And we did all this while my wife and I were having a baby. So you know I was no help. This year was a testimony to how awesome the Fish Team is on the Santa Fe as we brought on Chuck Dentino and Kimberly Kelly to join Sarah and Kavita who are all really leading the way. I am proud of the team's tireless efforts, ingenuity and shameless passion. I feel confident we will continue to shape things for a better future for native and recreational fish on the Santa Fe National Forest.

So now begins another push. The excitement is here and we hope you will be part of it.

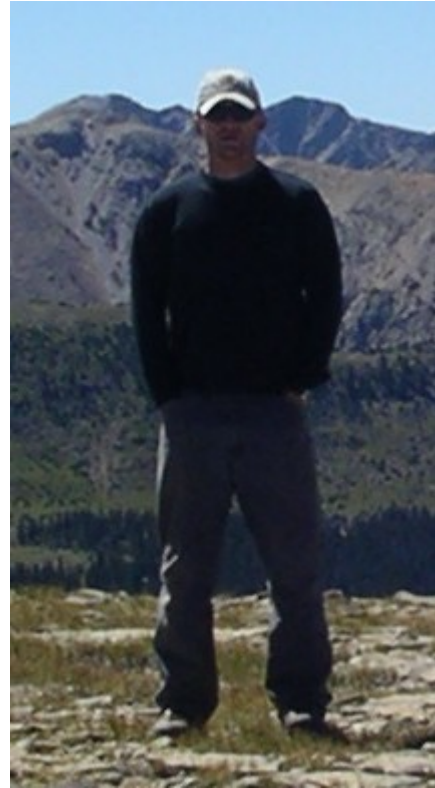
-Sean Ferrell
Forest Fish Biologist
20 December 2004

The Illustrious Staff



Sean Ferrell, Forest Fisheries Biologist

National Rio Grande Cutthroat Trout Coordinator; Regional Stream Habitat Inventory Coordinator



Chuck Dentino, Fisheries Biologist

Stream Inventory Quality Control Coordinator, Assistant Forest Fish Biologist, Habitat Restoration Leader



Kimberly Kelly, Forest Education Coordinator

Respect the Rio Education Coordinator, Volunteer Coordinator



Sarah Eddy, Biological Technician

Database Guru, Water Quality Team Leader, Stream Team Leader, Report Writer, Mountain Goat



Tara Anderson, Biological Technician
Stream Team Leader



Kavita Krishna, Biological Technician
*Assistant Education Coordinator,
Stream Team Leader*

The Field Crew

Respect the Rio Contact Ranger Team

Alex Kirkpatrick, SCA Intern

Sarah Martiny, SCA Intern



Alex.



Sarah M.

Panchuela Watershed Stream Team

Sarah Eddy, Team Leader

Annastassja Kiep, SCA Intern



L to R. Annastassja and Sarah. Panchuela Creek.

Polvadera Creek Stream Team

Kavita Krishna, Team Leader

Jeff Nelson, SCA Intern



Jeff.

Rio Guadalupe Stream Team

Tara Anderson, Team Leader

Dylan Hoffman, SCA Intern



L to R: Tara and Dylan. Rio Guadalupe

Volunteers

*Eddie Moore
Emily Phillips
Angelina Fragua
Monica Magdalena
Dan DeVall*

*Jessica Lucero
Alva Gachupin
Hannah Burtholf
Adam Rankin
Aaron Facka*



Emily Phillips.



Fish Team 2004. L to R: Jeff, Sarah E., Sarah M., Kavita, Tara, Sean, Kim, Dylan (not pictured: Chuck, Annastassja, Alex).

Partners and Contributors

Mary Orr
Erica Nevins
Gary Asbridge
Ronnie Maes
Jo Wargo
Ray Borrego
Ronnie Herrera
Peter Dudley
Charlie Jankiewicz
Dolores Maese
Carol Van Dorn
Derek Padilla
Jemez Ranger District
Anne Ferrell
Barbara Silva
Juanita Revak
Viola Tosa
Ron Gallegos
Mike Elliott
Walatowa Visitor Center
Erma Ruth
Rosemary Vigil
Betty Keene
Trish Moya
Mary Jo Gallegos
Deby Sarabia
Julie Luetzelschwab
Danielle Diehl
Amanda Martinez
Fernando Salinas
Amanda Webb
David Allen
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Willamette National Forest
James Adams
Gila National Forest
Chris Gatton
Gretchen Sausen
Katrina Lund
Lisa Matlock
Forest Archaeology Program
Mike Bremer
Anne Baldwin
Jennifer Boyd
Chris Toya
Luke McLarty
Jeff Grider
Leonard Magdalena
Connie Constan
John Peterson
Francisco Sanchez
Pecos/Las Vegas Ranger Districts
Esther Nelson
Joe Reddan
Espanola Ranger District
Alfred Medina
Donald Serrano
Chris Chavez
Sandy Hurlocker
Annie Apodaca
Miles Standish
John Miera
Steve Romero
Don Virgovic

Amy Unthank
Southwest Regional Office
Coyote Ranger District
Patsy Chavez
Thelma Chavez
John Dixon
John Phillips
Andrew Serrano
Rick Beer
Ruben Leal
Freddie Velasquez
Evelyn Lujan
Debbie Serrano
Donna Storch
Painted River Studio
Debra Robasky
Julie True
Michael McMannon
Mike Lujan
Gonzalo Varela
John Buehler
Richard Montoya
William Eaton
Santa Ana Pueblo Fire Crew
Jemez Fire Program
Larry Chinana
James Foley
Lance Elmore
Valles Caldera National Preserve
Dennis Trujillo
Carson National Forest
New Mexico Game and Fish
Nina Wells
Colorado Division of Fisheries
Peter Wilkinson
Yvette Paroz
Kirk Patten
Rick Castell
Eric Frey
Michael Martinez
Vidal Velasquez
Sabiñano Lovato
Leonardo Velasquez
Ricardo Vialpondo
Toby Gallegos
Rosa Gonzales
Michael Gonzales
Leroy Gonzales
Michael & Lizzie Montoya
Becky Vialpondo
Trout Unlimited
Joe McGurrian
Frank Weissbarth
Bill Schudlich
Jan Crawford
Rich Schrader
New Mexico Trout
Norm Siegel
Mike Maurer
Don Hurst
High Desert Angler
Meadowlark Senior Center
Seasports, Inc.
New Mexico Environment Dept

Gary Schiffmiller
Student Conservation Association
Youth Conservation Corps
Forestry Camp
Dia del Rio
Nicole MacRury-Viera
Apache-Sitgreaves National Forests
Bill Wall
Bureau of Land Management
Greg Gustina
Mount Hood National Forest
Rocky Mountain Research Station
Bob DuBey
American Forest Products
Roger Kleckner
Seven Springs Fish Hatchery
Jemez Valley Credit Union
Jemez Trail Country Store
Jemez Valley Public Schools
The Chuckwagon
Consetta's
The Laughing Lizard
Deb's Deli
Los Ojos
The Ridgeback
Elk Mountain Lodge
Jemez Mountain Electric Co-op
La Cueva Volunteer Fire Department
Doc Minter
Pat & Dave Kloeppforn
Anna Cole
Cuba Public Schools
Pajarito Environmental Ed Center
McCurdy School
Menaul School
Jemez Watershed Group
Meridian Institute
Environmental Ed Assoc. NM
Santa Fe Watershed Association
Albuquerque Open Space Division
Albuquerque Water Festival
Santa Fe Water Festival
Conservation Education, WO
Okanogan/Wenatchee NF's
Umatilla National Forest
Becca Wassell
Becky Tanguay
Bill Dowdy
Environmental Protection Agency
Pioneer West
Bandelier National Monument
Steve Fetting
New Mexico State Forestry
Cuba Soil & Water Conservation District
Edgewood Soil & Water Conservation District
Jemez Pueblo - Resource Protection Division
Army Corps of Engineers
Public Lands Interpretive Assoc.
Albuquerque Journal
Natural Resource Conservation Service
U.S. Fish & Wildlife Service

Stream Inventory

Santa Fe National Forest implemented its fourth successful season of stream inventory, utilizing the regional protocol for cold-water streams. The Santa Fe National Forest co-sponsored this year's training sessions that were hosted by the Apache-Sitgreaves National Forests as well as the Santa Fe. They were attended by the Apache-Sitgreaves National Forests, New Mexico Game and Fish, New Mexico Environment Department, Bureau of Land Management, White Mountain Apache Tribe, and Arizona Game and Fish Department.



Horsethief Creek. Annastassja.

The inventory gathers hard numbers on habitat components related to stream condition and it's repeatable as a monitoring tool. The Santa Fe National Forest Fisheries Program completed nearly **42 miles** of stream inventory:

- Polvadera Creek (13.8 miles)
- Rio Guadalupe (9.8 miles)
- Rito Perro (1.8 miles)
- Horsethief Creek (4.6 miles)
- Panchuela Creek (7.7 miles)
- Cave Creek (4.2 miles)

In addition, the Forest has finished **seven stream inventory reports**. Sarah Eddy completed two stream inventory reports from last year's data collection: Cañones Creek and Rio de las Vacas. Sarah did an exemplary job in producing these reports, which will be used to assist in NEPA documents as well as for planning watershed restoration and Rio Grande cutthroat trout re-introduction.



Polvadera Creek. Sean and Kavita.



Rio Guadalupe. Dylan and Tara.

High Lakes Inventory

The Santa Fe National Forest Fisheries Program returned to the Pecos Wilderness for the third year to conduct a high lakes inventory. This protocol measures water quality in high mountain lakes to monitor the effects of air pollution. In addition, we map the lakes for human use and impacts as well as determine the success of lakes for survivability of introduced fisheries.



Middle Fork Lake Pothole #3.

This year's trip was a success despite the lack of fishing opportunities. Previously unknown Arizona willow populations were discovered and rare Rocky Mountain bristlecone pine groves were formally documented. Much success was due to horse support from the folks at the Pecos Ranger District, Ron Maes from the RO, and financial support from the Forest Watershed program.



Arizona willow. Kavita.

To date, we have now surveyed over **52 acres** across **30 lakes and potholes**, which included 28 acres and 22 lakes and potholes in 2004:

- North Fork Lake
- North Fork Potholes (3)
- Middle Fork Lake
- Middle Fork Potholes (4)
- South Fork Potholes (3)
- South Fork Beaver Ponds (4)
- Santiago Lake
- Santiago Potholes (2)
- Pacheco Lake
- Gascon Point Pothole
- Upper Pecos Pothole



L to R: Sarah, Alex, Kim

Rio Grande Cutthroat Trout Re-introduction

With completion of the State of New Mexico Long-Range Management Plan for Rio Grande cutthroat trout, Santa Fe National Forest is now signed on to a State-wide and Range-wide Conservation Agreement that will help guide future restoration efforts. The Forest in partnership with New Mexico Game & Fish, Valles Caldera National Preserve, Bureau of Land Management, National Park Service, Trout Unlimited and New Mexico Trout is developing a strategy to create large metapopulations of the native fish assemblage. What this means is that several watersheds across the Forest will be re-invented. Native fish, such as Rio Grande cutthroat trout, sucker, chub and longnose dace, will be returned to their native waters and non-native fish will be removed.



Capulin Canyon.

Currently, an interagency team of biologists has been developing a smooth process for designing and implementing these complex projects with awesome assistance from Julie True. In the interim, the Santa Fe in partnership with Bandelier National Monument and NM Game & Fish is studying the possible re-introduction of a population in a fire-killed stream, Capulin Canyon, which would occupy approximately **8 miles** of stream.

Stream Temperature Monitoring

As the drought continued to persist across New Mexico, the fish program entered its fourth year of intensive forest-wide monitoring of stream temperatures. Temperature monitoring equipment, called a Stowaway Tidbit, is the size of a quarter and can stay in the stream year-round. 18 Tidbits were deployed in **7 streams** across the Forest, measuring temperature for **78 miles** of stream every four hours from the beginning of June until October.

Early analysis indicated a wide variation of effects related to localized conditions from stream drying to maintaining tolerable temperatures for trout survival. Sarah Eddy championed this program and has authored the extensive Forest-wide monitoring summary report, which is due out this winter.



Rio de las Vacas. Sarah E.

Fish Distribution

Snorkeling continued to be a mainstay for determining fish composition and distribution on the Santa Fe National Forest. This protocol was introduced to the Santa Fe in 2001 and offers opportunities to teach others about how fish interact with their habitat. While at stream inventory training, attendees had the pleasure of enjoying the last day in the water snorkeling. At the Arizona training, snorkelers observed the extremely rare loachminnow exhibit spawning behavior – the first time that has ever been observed in the wild.



Polvadera Creek.

Individuals from the Santa Fe and Apache-Sitgreaves National Forests, New Mexico Game and Fish, New Mexico Environment Department, Bureau of Land Management, White Mountain Apache Tribe, and Arizona Game and Fish Department were trained over the summer season.

This upstream snorkeling methodology paved the way for nearly **50 miles** of mapping streams for fish composition and distribution across the Forest.

- Polvadera Creek
- Rio de las Vacas
- Cave Creek
- Horsethief Creek
- Rito Anastacio
- Rito Perro
- Panchuela Creek
- Rio Puerco

Program Support

The Forest Fisheries program continues to develop and strengthen relationships with other programs and has provided input into on-going and upcoming projects. The projects are sponsored by recreation, forestry, fire, watershed and range, including:

- Cuba 4 Allotments EA/AMP
- Highway 126 Improvement Project
- Jemez Campgrounds Thinning Project
- Coyote Roads EA
- Jemez RAPS
- Santa Fe National Forest Website
- Pecos Wilderness Map update
- San Pedro Parks Wilderness Map update
- San Diego Allotment EIS
- Buckman Water Diversion Project EIS
- San Juan Prescribed Burn

San Pedro Parks Wilderness Monitoring



Rio de las Vacas. Jeff

After its inaugural beginning in 2001, an elaborate report was completed and follow-up monitoring began. A week-long intensive effort was conducted this year by the fisheries and watershed program, covering nearly **7,000 feet** of riparian area in Rio de las Vacas and Rio Puerco Watersheds within the 40,000-acre San Pedro Parks Wilderness.

The team focused on habitat, water

monitoring conditions in stream

The Vacas Project

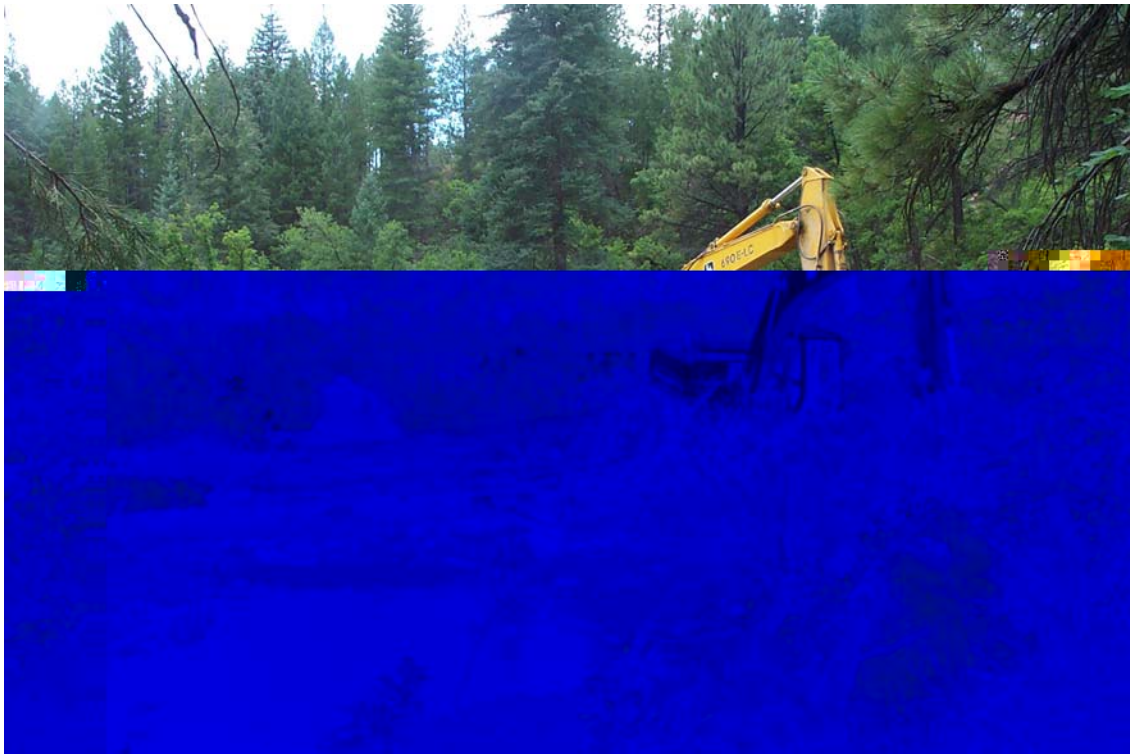
After the completion of a stream inventory in Rio de las Vacas in 2001, it was apparent that the stream needed a little love. Thus the grand Rio de las Vacas Stream and Riparian Restoration Plan and Recommendations was born in 2002, evolving into what is better known as the Vacas Project.

Implementation of Phase 1 began in 2003. 225 logs were decked in the project area and were placed in the stream and floodplain in 2004, recovering nearly **2 miles** of stream. 75 trees were cut to enhance hardwood growth and improve stream habitat. Two miles of road was closed and two ford crossings were repaired. Twenty pools were created using rock and wood with likely more pools to develop during future channel-forming flood events.



Rio de las Vacas.

The success of this project is in great part to Chuck Dentino, Erica Nevins, Gary Asbridge, Ronnie Herrera, Ray Borrego, Gretchen Sausen, James Foley, Larry Chinana, Steve Romero, Connie Constan, Jennifer Boyd, Jemez Mountain Electric Coop., Carol van Dorn, and the Youth Conservation Corps. The project is financed by Trout Unlimited, Bring Back the Natives and the Habitat Stamp Program.



Rio de las Vacas.

Education



Campfire Program.

The education program came under new leadership with the addition of Kimberly Kelly. With her guidance and Kavita Krishna's help, the education program reached over **965 students** and **541 adults** (which includes **58 teachers**). In addition, over **2,000** public contacts were made, totaling over **3,500** people.

Schools included Colinas del Norte and Menaul schools in Albuquerque and Jemez Valley public schools. Students learned about native fish, bats, fire ecology, wilderness, water quality, healthy watersheds, and recreation. The education program also was a key collaborator at the Albuquerque Water Festival, Santa Fe Water Festival, Walatowa Earth Day, Jemez Springs Fourth of July Celebration, Chapparal Gi

Native Fish Aquarium Display

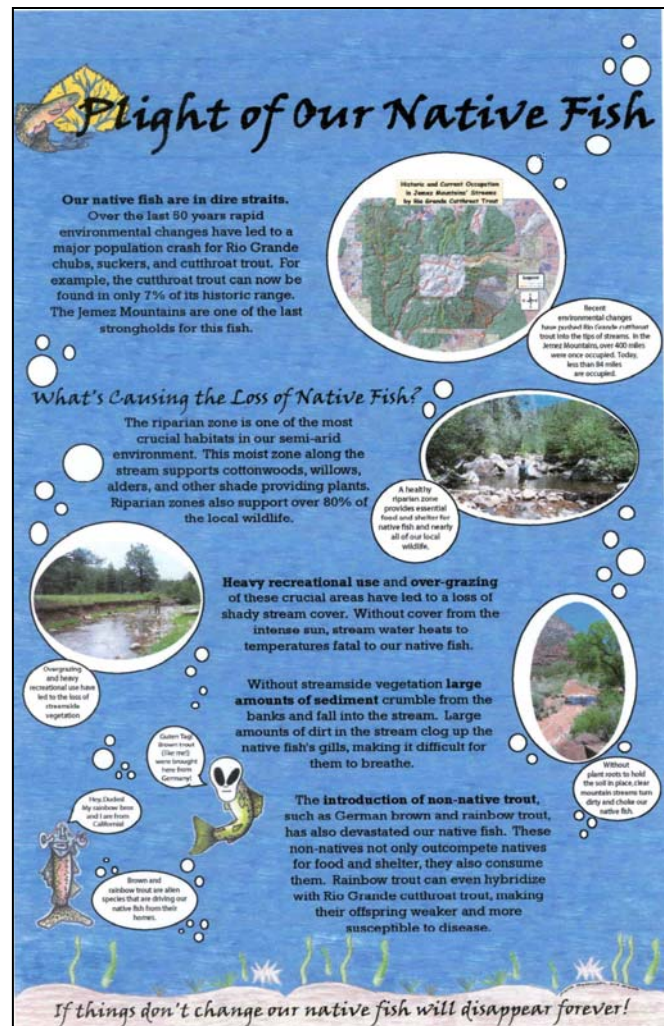
After two and a half years of planning, finding funding sources, and collaborating with the Jemez Pueblo, we unveiled a 180-gallon coldwater tank at the Walatowa Visitor Center in January.

The tank was designed by US Aquariums, and installed with great help from Ron Maes. The whole effort was kindly financed by New Mexico Trout.



Ron Maes.

A native fish assemblage of Rio Grande cutthroat trout, Rio Grande suckers, and longnose dace currently reside in the tank, feeding off mealworms and freeze-dried krill (also financed by New Mexico Trout).



As part of the display, two informative panels, one art piece and an interactive art display await unveiling. The panels were designed by our very own Sarah Eddy with the help of local children's artistic talents and financed by New Mexico Environment Department and New Mexico Trout. And the artwork was beautifully done and partially donated by Debra Robasky at Painted River Studio.

Respect the Rio - Education



After two years, Respect the Rio (RtR) is rapidly becoming a successful education and watershed restoration program. Not only has the program reached over **4,000 people**, but it has also provided a common goal for disciplines such as wildlife/fisheries, recreation, hydrology, and range on the Jemez and Cuba Ranger Districts.

RtR is a combination of environmental education, watershed restoration, and public involvement that empowers local communities and forest users to participate in watershed restoration. This program is almost entirely funded by NMED and EPA.

SCA interns Sarah Martiny and Alex Kirkpatrick contacted **1,862 people** this summer during our contact ranger program. Dispersed campers along the Rios Guadalupe, Cebolla, and las Vacas learned about current watershed projects and how to be river-friendly campers.



Contact Ranger Program. Alex.

475 people attended our interpretive campfire programs held on Friday and Saturday nights at the Jemez Falls Campground. Topics included bats, beavers, bears, wildfires, backcountry hiking, and archaeology. The success of the program in many regards is due to guest speakers, which included Mike Bremer, Jennifer Boyd, Christopher Toya, Luke McLarty, Jeff Grider, and Leonard Magdalena.

Many more individuals have been reached through a proactive multi-media campaign. With topics ranging from “why is this road closed” to “not driving through streams,” 14 interpretive signs have been developed and placed near problem areas.

Local restaurants in Cañon, Jemez Springs and La Cueva have joined in by displaying RtR informational table tents and placemats.

The RtR website has been constructed and is now available for viewing.

www.fs.fed.us/rtr

Other media include newspaper articles, interpretive panels, temporary tattoos and a native fish aquarium at the Walatowa Visitor Center.



RtR Tattoo.

Respect the Rio – Restoration



Dispersed Site Modification. Rio Cebolla

One of the three major components of Respect the Rio is on-the-ground restoration efforts. The Fisheries Program spearheaded one of many on-going restoration tasks.

In the Guadalupe Watershed, riparian, floodplain and wetland conditions are being degraded by off-road vehicle use, dispersed recreation and in some instances cattle grazing. With an off-road vehicle closure being implemented, buck-n-pole fence lines were constructed to control vehicle traffic patterns and help enforce the closure. Further fencing was designed to exclude both vehicles

and cattle from entering a newly created wetland. Heavy equipment was used to scarify hardened soil in modified dispersed camping complexes.

Over **5,000 feet** of buck-n-pole fence was constructed to create a **3-acre** enclosure and protect **3 miles** of stream and riparian from vehicle access. **10 acres** of hardened surface were ripped and scarified and seeded with native grass in modified dispersed camping complexes. Boulder placement was also used to deflect vehicle traffic.



Wetland enclosure. Rio Cebolla.



Skeleton Buck-n-Pole Fencing Crew for Respect the Rio Watershed Restoration Project. L to R: Chuck, Troy Witt, Kavita (not pictured: Richard Atencio, Paul Pinto, Jonathan Cordova, Ryan Montoya, Brian Sandoval)

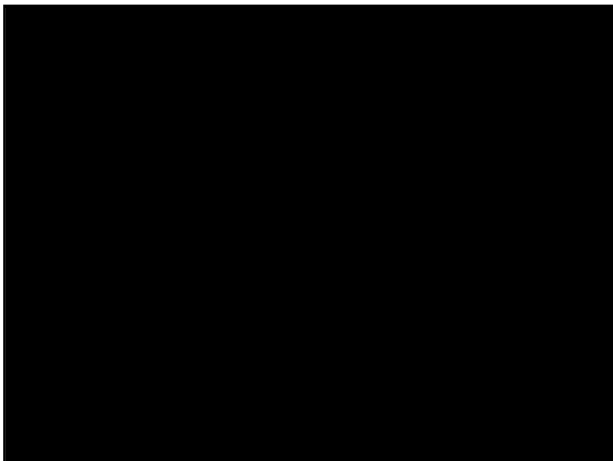
Kid's Fishing Day



Carlos Cutthroat.

Booths were managed by the Forest Service, New Mexico Game & Fish, and New Mexico Trout and included:

- Rio Grande Cutthroat Trout Life Cycle Game
- Stream Simulator
- Gyotaku
- Native Fish Anatomy
- Leave No Trace
- Fly Tying
- Casting
- Aquatic Insects



In July, **145 children** ages 4-11 years and nearly **120 adults** turned out for the Forest's 14th Annual Kids' Fishing Day at Seven Springs State Fish Hatchery. This event was jointly sponsored by New Mexico Trout, New Mexico Game & Fish, local businesses and Jemez/Cuba Resource Area.

Each participant received a passport and goody bag. If they participated in six of the eight educational booths, they received a T-shirt commemorating the day. Respect the Rio mascots' Carlos Cutthroat and Perl Stonefly were present to greet participants.



Stream Simulator.

**For further information about the Santa Fe National Forest Fisheries Program,
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